

New larval food-plant and pupa of the species *Satyrrium abdominalis* in East Turkey (*Lepidoptera, Lycaenidae*)¹

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Abstract: New larval food-plant and pupa of the species *Satyrrium abdominalis* in East Turkey (*Lepidoptera, Lycaenidae*). - *Cesa News* 64: 1-3, 3 figs.

This paper deals with the pupa and the food-plant of the species *Satyrrium abdominalis* in the family *Lycaenidae* recorded in Van Province (East Turkey). *Cerasus brachypetala* var. *bornmuelleri* is reported here as new larval food-plant of the species.

Key words: *Satyrrium abdominalis*, *Lycaenidae*, *Lepidoptera*, *Cerasus brachypetala*, *Rosaceae*, bionomy, pupa, food-plant, Van, Turkey.

Among the plant material collected in last year for Van Herbarium, a full grown lycaenid caterpillar on the plant, *Cerasus* was detected by the second author. Unfortunately the caterpillar couldnot be photographed, as it pupated next day after collecting. In this short article, the pupa, adult butterfly and its larval food plant *Cerasus brachypetala* of a lycaenid species are briefly reported here for the first time.

The *Lycaenidae* is the richest family in species of the butterflies of Turkey, which is currently composed of 176 species (Koçak & Kemal, 2006, 2007, 2009; Koçak, Kemal & Kayci, 2011)⁴ The genus *Satyrrium* of the subfamily *Theclinae* is represented by ten species in Turkey. *Satyrrium abdominalis* Gerhard (**Fig.2**) is a well known butterfly species in Turkey, which is reported from 45 provinces (including Van) so far (55.55% of Turkey). It is easily distinguishable from closely related species *Satyrrium mardinum* Riley, by the shape of postdiscal creamy striae on underside of hindwing.

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⁴ see also info-system of the Cesa <http://www.cesa-tr.org/Infos.htm>



Fig. 1 – *Satyrium abdominalis*, dorso-lateral, ventral and lateral view of the pupa (15 6 2010), photo M.Kemal (Cesa)



Fig. 2 - *Satyrium abdominalis*, adult insect emerged on 16 June 2010, photo & det. M.Kemal (Cesa)



Fig. 3 – *Cerasus brachypetala* Boiss. var. *bornmuelleri* (Schneider) Browicz (*Rosaceae*) - Food plant of the caterpillar of *Satyrrium abdominalis*, Van, Çatak, Konalga, 24 5 2011 (photo & det. M. Mükemre)

Previously known larval food plants of *Satyrrium abdominalis* are *Amygdalus*, *Prunus*, *Crataegus*, *Eleagnus*, and rarely *Lonicera persica* (Wiltshire, 1943; Hesselbarth et al., 1995). *Cerasus brachypetala* Boiss. var. *bornmuelleri* (Schneider) Browicz [det. M. Mükemre] (**Fig. 3**) is a new larval food-plant for the species of *Satyrrium abdominalis*. The pupa of *Satyrrium abdominalis* is illustrated here for the first time. Its general colouration brown with irregular, numerous dark brown spots except ventral side, and the outer surface hairy (**Fig. 1**).

Material examined: 1♂ ex larva. Turkey: Van Prov., Çatak, Konalga, Tanrıverdi Mezrası (Gova kale) 37°50'992''N, 43°09'828''E, 2199m, 27 5 2010, collected together with the plant *Cerasus*; pupation on 28 5 2010, butterfly emerged on 18 6 2010.

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Calophasia lunula in South East Turkey (*Lepidoptera*, *Noctuidae*)

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Abstract: *Calophasia lunula* in South East Turkey (*Lepidoptera*, *Noctuidae*). Cesa News 64: 4-6
5 figs.

Occurrence of *Calophasia lunula* in SE Turkey with brief information on its bionomy is discussed.

Key words: *Calophasia lunula*, *Noctuidae*, *Lepidoptera*, *Ichneumonidae*, *Hymenoptera*, *Linaria*, *Plantaginaceae*, fauna, bionomy, Turkey.

During an excursion to the vicinity of Şirvan, a full grown, healthy noctuid caterpillar was found on the plant *Linaria* sp. (*Plantaginaceae*) on 28 October, 2010 (**Fig.1**). The larval food-plant *Linaria* is well known in Europe, but this is recorded in East Turkey for the first time.

The species could be easily identified as “*Calophasia lunula* (Hufnagel,1766)” (**Figs.2,3**), due to the typical markings and colourations of the larva, which is widely distributed from West Europe to Turkey, Middle East countries, Iran, Afghanistan and Central Asia. In Turkey, this holarctic species was known in 19 province of total 81 (23.45%). The record of this species is new to Şirvan district, and also to the province of Siirt (Koçak & Kemal, 2006, 2007, 2009).

Within a week after collecting, it pupated under the room condition. On 20 April 2011, an ichneumonid wasp emerged from the pupa (**Fig.4**), instead of moth. This wasp belongs to the subfamily *Anomaliniinae* (**Fig.5**).



Fig. 1 – *Linaria* sp. (*Plantaginaceae*), Turkey, Siirt Prov., Şirvan, Maden geçidi 1450m 28 10 2010 photo M. Kemal (Cesa)

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Figs. 2,3 - Full grown caterpillar of *Calophasia lunula* from Şirvan Maden geçidi 1450m 28 10 2010 on *Linaria* sp.



Fig. 4 - Cocoon of *Calophasia lunula* on *Linaria*, and the hole made by the wasp during emerging, 20 April 2011 photo M.Kemal (Cesa)



Fig. 5 – *Ichneumonid* sp., parasitic wasp of *Calophasia lunula* (Noctuidae) emerged on 20 April 2011, photo M Kemal (Cesa)

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- Koçak, A.Ö. & M. Kemal**, 2009, Revised Checklist of the Lepidoptera of Turkey. *Cent. ent. Stud., Priamus Suppl.* 17: 1-253.

Teratolytta kulzeri, a little known Blister Beetle from East Turkey (Coleoptera, Meloidae)

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Abstract: *Teratolytta kulzeri*, a little known Blister Beetle from East Turkey (Coleoptera, Meloidae). Cesa News 64: 7- 11, 6 figs. 1 map.

Occurrence of *Teratolytta kulzeri* in East Turkey is reported and briefly discussed. The adult insect is illustrated in nature for the first time.

Key words: *Teratolytta kulzeri*, Meloidae, Coleoptera, fauna, Turkey.

During an excursion on 5 June 2011 in East Turkey within the program of the Cesa Project “Entomofauna of Turkey”, the authors had opportunity to observe and collect specimens of the Blister Beetle (*Teratolytta kulzeri*) from Saruhan Mount (Bitlis Prov.) (**Figs.1-6**).

The genus *Teratolytta* was established by Semenow (1894: 533-534) with the type-species “*Taratolytta* [sic!] *dives*” Brullé, 1832⁸, by original designation.



Fig.1 - *Teratolytta kulzeri* in Bitlis Prov., about to fly. Photo M Kemal (Cesa)

⁶ <http://zoobank.org/?lsid=urn:lsid:zoobank.org:author:671DD110-BDF1-49C8-964D-2A9251BE7824>

⁷ <http://zoobank.org/?lsid=urn:lsid:zoobank.org:author:4755104C-24B4-4E00-8831-5F5E08B9E831>

⁸ Brullé proposed the species as “*Cantharis dives*”.



Fig. 2 - *Teratolytta kulzeri* in Bitlis, female on the ground. Photo M Kemal (Cesa)



Fig. 3 - *Teratolytta kulzeri* in copula (larger is female). Photo M Kemal (Cesa)



Fig. 4 - *Teratolytta kulzeri* in copula. Female carries male during movement. Photo M. Kemal (Cesa)



Fig. 5 - *Teratolytta kulzeri* in Bitlis, female on *Poaceae*. Photo M.Kemal (Cesa)



Fig. 6 - *Teratolytta kulzeri* in Bitlis. Male of the species is also recognized by the special shape of the last abdominal tergite. Photo M.Kemal (Cesa)



Map 1- Known localities of *Teratolytta kulzeri* in South East Turkey (marked with orange circle). The species is reported only from three provinces, Bitlis, Van and Hakkari (used Google Map).

The species *Teratolytta kulzeri* (**Figs.1,2**) was described by Kaszab (1958) from “Arm. Taurus, Moks”. The valid name of the type locality is Mukus [older name] (=Bahçesaray district, Van Province in Turkey). Diagnostic features of the specimens collected from Bitlis conform to the re-description prepared by Bologna & Giulio (2006), especially apically expanded last abdominal tergite of the males (**Fig.6**). However, body length is variable in both sexes (in males 10-13mm, in females 12-20mm).

Behaviour of the adult *Teratolytta kulzeri* was unknown (Bologna & Giulio,2006). The species inhabits locally at upper heights of the mountains with the plant cover of malacophyllous steppe. During copulation, the female carries male, if they move (**Fig.4**). The beetles were seen in copula on *Vicia* (*Fabaceae*), as well as on other plants like *Poaceae* (**Fig.5**).

Adult insect appears in late May to early June. The present distribution of the species is restricted to the mountainous region of South of Van Lake (East Turkey) in three provinces, Bitlis, Van, and Hakkari (**Map 1**).

Material examined: 5♂, 5♀, Turkey, Bitlis Prov., Tatvan distr., Saruhan mountain 2150m 3 June 2011, M. Kemal leg (coll.Cesa).

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New records of *Dolichopodidae* from the Democratic Republic of Congo (*Diptera: Empidoidea*)⁹

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Abstract: New records of *Dolichopodidae* from the Democratic Republic of Congo (*Diptera: Empidoidea*). - *Cesa News* 64: 12-22, 16 figs.

New records of *Dolichopodidae* from the Democratic Republic of Congo, resulting from the Boyekoli Ebale Congo Expedition 2010, are presented. Records of 25 Afrotropical species are provided, six of which represent new records for the country, namely: *Acropsilus stekolnikovi* Grichanov, *Apelastoneurus dobronosovi* (Grichanov), *A. gabonensis* (Grichanov), *A. nigeriensis* (Grichanov), *Chrysotus arduus* Parent and *Hercostomus pseudolictor* Grichanov. Light micrographs of some typical and rare species are included.

Key words: Boyekoli Ebale Congo Expedition 2010, Congo River Basin, Democratic Republic of Congo, Guineo-Congolian Forest, new records, tropical Africa.

Introduction

The Democratic Republic of the Congo is the largest country in Sub-Saharan Africa, 60% of which falls within the Congo River Basin. Sampling efforts by Belgian entomologists during the 1930s and 1950s, however, concentrated on amassing large collections of Diptera from national parks in the southern and eastern parts of the country. These parks (*e.g.*, Upemba and Garamba), largely comprise mesic savanna habitats, with gallery forest bordering rivers and little intensive sampling took place in the Guineo-Congolian Forest *per se*. Diptera material resulting from this earlier sampling is chiefly deposited in the Royal Belgian Institute of Natural Sciences (Institut Royal des Sciences Naturelles de Belgique), Brussels and the Royal Museum for Central Africa, Tervuren (Musée Royal de l'Afrique Centrale), Tervuren (both Belgium). *Dolichopodidae* material resulting from these earlier collections was extensively studied by O. Parent, P. Vanschuytbroeck, O.P. Negrobov and I.Ya. Grichanov. As a result, approximately 270 species of the family are known from the Democratic Republic of Congo, representing the largest recorded dolichopodid fauna of any African country.

Participation in the Boyekoli Ebale Congo Expedition 2010, by two of us (AHK-S and PG), enabled more extensive sampling of the family in the hitherto poorly-sampled swamp forests bordering the Congo River in the Guineo-Congolian Forest. This paper, therefore, presents new records for 24 Afrotropical dolichopodid species, six of which are recorded from the Democratic Republic of Congo for the first time. This paper is the second contribution dealing with the Diptera, resulting from the Boyekoli Ebale Congo Expedition 2010, the first of which dealt with frugivorous Tephritidae (Virgilio *et al.* 2011).

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Material and methods

Sampling stations, dates and methods deployed are summarized in the following Table.

Register	Locality	Date		Biotope	Technique	Leg.
30001	Yaekela	2-May-10	0°48'37.57"N, 24°17'07.21"E	primary rain forest	sweeping	PG
30002	Yaekela	2-May-10	0°48'37.57"N, 24°17'07.21"E	marsh land	sweeping	PG
30003	Yaekela	2-May-10	0°48'37.57"N, 24°17'07.21"E	road side	sweeping	PG
30004	Yaekela	2-May-10	0°48'37.57"N, 24°17'07.21"E	marsh land	sweeping	PG
30005	Yaekela	2-May-10	0°48'37.57"N, 24°17'07.21"E	marsh land	sweeping	PG
30006	Yaekela	2-May-10	0°48'37.57"N, 24°17'07.21"E	marsh land	sweeping	PG
30007	Yaekela	2-May-10	0°48'37.57"N, 24°17'07.21"E	marsh land	sweeping	PG
30008	Yaekela	4-May-10	00°47'119"N, 24°17'882"E	floating reeds	sweeping	PG
30009	Yaekela	4-May-10	00°47'119"N, 24°17'882"E	floating reeds	sweeping	PG
30010	Yaekela	4-May-10	00°54'668"N, 24°14'126"E	floating reeds	sweeping	PG
30011	Yaekela	4-May-10	00°54'426"N, 24°14'277"E	secondary forest	sweeping	PG
30012	Yaekela	4-May-10	00°54'426"N, 24°14'277"E	bamboo forest	sweeping	PG
30013	Yaekela	4-May-10	0°48'37.57"N, 24°17'07.21"E	secondary forest	pitfalls	PG
30014	Yaekela	5-May-10	0°48'37.57"N, 24°17'07.21"E	pool	sweeping	PG
30015	Yaekela	5-May-10	0°48'37.57"N, 24°17'07.21"E	swamp forest	sweeping	PG
30016	Yaekela	5-May-10	0°48'37.57"N, 24°17'07.21"E	secondary forest	pitfalls	PG
30017	Yaekela	5-May-10	0°48'37.57"N, 24°17'07.21"E	pools	sweeping	PG
30018	Yaekela	5-May-10	0°48'37.57"N, 24°17'07.21"E	secondary forest	light trap	PG
30019	Yaekela	6-May-10	0°48'37.57"N, 24°17'07.21"E	secondary forest	light trap	PG
30020	Yaekela	7-May-10	0°48'37.57"N, 24°17'07.21"E	secondary forest	sweeping	PG
30021	Yaekela	7-May-10	0°48'37.57"N, 24°17'07.21"E	secondary forest	sweeping	PG
30022	Yaekela	7-May-10	0°48'37.57"N, 24°17'07.21"E	secondary forest	pitfalls	PG
30023	Yaekela	7-May-10	0°48'37.57"N, 24°17'07.21"E	secondary forest	light trap	PG
30024	Yaekela	7-May-10	0°48'37.57"N, 24°17'07.21"E	secondary forest	light trap	PG
30025	Yaekela	2-7-May-2010	0°48'37.57"N, 24°17'07.21"E	primary forest	Malaise trap	PG
30026	Yaekela	2-7-May-2010	0°48'37.57"N, 24°17'07.21"E	primary forest	Malaise trap	PG
30027	Yaekela	2-7-May-2010	0°48'37.57"N, 24°17'07.21"E	secondary forest	Malaise trap	PG
30030	Yaekela	2-7-May-2010	0°48'37.57"N, 24°17'07.21"E	secondary forest	Malaise trap	PG
30031	Yaekela	2-7-May-2010	0°48'37.57"N, 24°17'07.21"E	secondary forest	Malaise trap	PG
30032	Kona	11-May-10	2°02'32.97"N, 22°47'26.09"E	primary swamp forest	sweeping	PG
30033	Kona	11-May-10	2°02'32.97"N, 22°47'26.09"E	primary swamp forest	sweeping	PG
30034	Kona	11-May-10	2°02'32.97"N, 22°47'26.09"E	swamp forest	light trap	PG
30035	Kona	12-May-10	2°02'32.97"N, 22°47'26.09"E	swamp forest	pitfalls	PG
30036	Kona	12-May-10	2°02'32.97"N, 22°47'26.09"E	primary swamp forest	sweeping	PG
30037	Kona	12-May-10	2°02'32.97"N, 22°47'26.09"E	swamp forest	light trap	PG
30038	Kona	13-May-10	2°02'32.97"N, 22°47'26.09"E	primary swamp forest	sweeping	PG
30039	Kona	13-May-10	2°02'32.97"N, 22°47'26.09"E	swamp forest	light trap	PG
30040	Kona	13-May-10	2°02'32.97"N, 22°47'26.09"E	swamp forest	pitfalls	PG
30041	Kona	14-May-10	2°02'32.97"N, 22°47'26.09"E	swamp forest	light trap	PG
30042	Yaekela	3-May-10	0°48'37.57"N, 24°17'07.21"E	primary rain forest	white pan trap	PG
30043	Yaekela	3-May-10	0°48'37.57"N, 24°17'07.21"E	primary rain forest	red pan trap	PG
30044	Yaekela	3-May-10	0°48'37.57"N, 24°17'07.21"E	primary rain forest	blue pan trap	PG
30045	Yaekela	3-May-10	0°48'37.57"N, 24°17'07.21"E	primary rain forest	yellow pan trap	PG
	Likombo forest, 2 km SW Bomane	20-22-May-2010	1° 17' 0.56"N, 23° 43' 24.88"E	lowland evergreen primary forest (disturbed)	Malaise traps	A K-S
	Bomane village area at:	20-24-May-2010	01°16.283'N, 23°43.994'E	bush paths & village environs	Sweeping	A K-S
	Eyolo forest, ca. 2 km E Lieki	25-29-May-2010	0° 41' 47.112"N, 24° 14' 30.6954"E	lowland evergreen swamp forest	Malaise traps	A K-S
	Eyolo forest, ca. 2 km E Lieki	2-Jun-10	0° 41' 47.112"N, 24° 14' 30.6954"E	lowland evergreen swamp forest	sweeping	A K-S
	Lieki village area at:	25-May-5-June-2010	00°41.117'N, 24°14.362'E	bush paths & village environs	sweeping	A K-S
	Yafira forest transect	29-31-May-2010	0° 42' 9.684"N, 24° 12' 2.88"E	primary lowland evergreen forest	Malaise trap	A K-S
	Bosega, nr. Djabir village	3-Jun-10	0° 31' 5.304"N, 24° 9' 56.6634"E	leaves primary lowland evergreen forest	sweeping	A K-S
	Basoko town at:	20-May-10	01°13.801'N, 23°36.444'E	grasses & other vegetation	sweeping	A K-S
	Likombo forest, 2 km SW Bomane	20-21-May-2010	1° 17' 0.5634"N, 23° 43' 24.8874"E	lowland evergreen primary forest (disturbed)	Malaise traps	A K-S
	Bomane village area at:	20-24-May-2010	01°16.283'N, 23°43.994'E	bush paths & village environs	sweeping	A K-S
	Yafira area at:	30-31-May-2010	0° 42' 9.684"N, 24° 12' 2.88"E	primary lowland evergreen forest	Malaise traps	A K-S

Records listed below are arranged alphabetically by genus. Information on world distribution for each species listed follows Grichanov (2003–2011). Type localities are provided and country lists are arranged alphabetically by zoogeographical region. New country records are marked with an asterisk (*).

Material of the newly-recorded species is housed in the Collections of the Biodiversity Center (Centre de Surveillance de la Biodiversité) in Kisangani (D.R. Congo), while voucher specimens are deposited in the Collections of the National Museum, Bloemfontein, South Africa (BMSA) and Royal Belgian Institute of Natural Sciences, Brussels, Belgium (IRSNB). All specimens from Brussels are placed in vials filled with 70% alcohol; the vials are aggregated in one-liter cans. All specimens from Bloemfontein are mounted on pins and placed in the museum drawers. Six new for science species were also found in the 2010 collections. Their descriptions will be published elsewhere. Images of selected species were captured with a ®Zeiss Discovery V-12 stereomicroscope and ®AxioCam MRc5 camera attachment.

Material examined

1. *Acropsilus brevitatus* (Parent, 1937) (Fig.1)

Material: 3♂, 6♀, D.R. Congo, Oriental Prov., Bomane village area at: 01°16.283'N, 23°43.994'E, 20–24.v.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs; D.R.

Congo, Oriental Prov., Eyolo forest, ca. 2 km E Lieki, 0.69642, 24.24186, 02.vi.2010, A.H. Kirk-Spriggs, sweeping, lowland evergreen swamp forest; D.R. Congo, Oriental Prov., Likombo forest, 2 km SW Bomane, 1.28349, 23.72358, 20–22.v.2010, A.H. Kirk-Spriggs, Malaise traps, lowland evergreen primary forest (disturbed); 9♂♀, 30021, D.R. Congo, Yaekela, 07.v.2010, P. Grootaert, secondary forest, sweeping; 1♂, 1♀, 30015, D.R. Congo, Yaekela, 05.v.2010, P. Grootaert, swamp forest, sweeping; 1♂, 30003, D.R. Congo, Yaekela, 02.v.2010, P. Grootaert, roadside, sweeping; 4♂♀, 30032, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping; 5♂♀, 30033, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping; 10♂♀, 30038, D.R. Congo, Kona, 13.v.2010, P. Grootaert, primary swamp forest, sweeping.

Distribution: Type locality: “Congo Belge: Eala”. Afrotropical: Democratic Republic of Congo, Namibia and Tanzania. Palaearctic: Israel.

2. *Acropsilus stekolnikovi* Grichanov, 1998

Material: 8♂♀, 30021, D.R. Congo, Yaekela, 07.v.2010, P. Grootaert, secondary forest, sweeping; 1♂, 1♀, 30004, D.R. Congo, Yaekela, 02.v.2010, P. Grootaert, marshland, sweeping; 2♂, 1♀, 30015, D.R. Congo, Yaekela, 05.v.2010, P. Grootaert, swamp forest, sweeping; 1♂, 6♀, 30036, D.R. Congo, Kona, 12.v.2010, P. Grootaert, primary swamp forest, sweeping; 15♂♀, 30006, D.R. Congo, Yaekela, 02.v.2010, P. Grootaert, marshland, sweeping; 1♂, 1♀, 30005, D.R. Congo, Yaekela, 02.v.2010, P. Grootaert, marshland, sweeping; 18♂♀, 30032, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping; 1♂, D.R. Congo, Yaekela, blauw. [no date or collecting method]; 12♂♀, 30033, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping; about 100♂♀, 30038, D.R. Congo, Kona, 13.v.2010, P. Grootaert, primary swamp forest, sweeping.

Distribution: Type locality: “Sierra Leone: Freetown, Sussex”. Afrotropical: Democratic Republic of Congo* and Sierra Leone.

3. *Amblypsilopus munroi* (Curran, 1924) (Fig.2)

Material: 3♂, 6♀, D.R. Congo, Oriental Prov., Lieki village area at: 00°41.117'N, 24°14.362'E, 25.v–4.vi.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs; D.R. Congo, Oriental Prov., Eyolo forest, ca. 2 km E Lieki, 0.69642, 24.24186, 25–29.v.2010, A.H. Kirk-Spriggs, Malaise traps, lowland evergreen swamp forest.

Distribution: Type locality: “South Africa: Eastern Cape, East London”. Afrotropical: Angola, Democratic Republic of Congo, Mozambique, Namibia, Nigeria, South Africa, Tanzania and Zimbabwe. Oriental: Sri Lanka.



Fig. 1. *Acropsilus brevitatus* (Parent, 1937)



Fig. 2. *Amblypsilopus munroi* (Curran, 1924)

4. *Amblypsilopus tenuicauda* (Parent, 1936) (Fig.3)

Material: 2♂, D.R. Congo, Oriental Prov., Yafira forest transect, 00.69594, 24.20107, 29–31.v.2010, A.H. Kirk-Spriggs, Malaise traps, primary lowland evergreen forest.

Distribution: Type locality: “Congo Belge: Eala”. Afrotropical: Democratic Republic of Congo.

5. *Apelastoneurus confusibilis* (Parent, 1937) (Fig.4)

Material: 4♂, D.R. Congo, Oriental Prov., Bomane village area at: 01°16.283'N, 23°43.994'E, 20–24.v.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs; 3♂, 30038, D.R. Congo, Kona, 13.v.2010, P. Grootaert, primary swamp forest, sweeping.

Distribution: Type locality: “Congo Belge: Eala”. Afrotropical: Côte d’Ivoire, Democratic Republic of Congo and South Africa.



Fig. 3. *Amblypsilopus tenuicauda* (Parent, 1936)



Fig. 4. *Apelastoneurus confusibilis* (Parent, 1937)

6. *Apelastoneurus dobronosovi* (Grichanov, 2004)

Material: 1♂, 30021, D.R. Congo, Yaekela, 07.v.2010, P. Grootaert, secondary forest, sweeping; 1♂, 2♀, 30032, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping; 1♂, 2♀, 30033, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping; 1♂, 30038, D.R. Congo, Kona, 13.v.2010, P. Grootaert, primary swamp forest, sweeping.

Distribution: Type locality: “Cameroon: Ebolowa-Nkuemvone”. Afrotropical: Cameroon and Democratic Republic of Congo*.

7. *Apelastoneurus gabonensis* (Grichanov, 2004) (Fig.5)

Material: 7♂, 6♀, D.R. Congo, Oriental Prov., Eyolo forest, ca. 2 km E Lieki, 0.69642, 24.24186, 02.vi.2010, A.H. Kirk-Spriggs, sweeping, lowland evergreen swamp forest.

Distribution: Type locality: “Gabon: Ntoun”. Afrotropical: Democratic Republic of Congo* and Gabon.

8. *Apelastoneurus nigeriensis* (Grichanov, 2004)

Material: 1♂, 30038, D.R. Congo, Kona, 13.v.2010, P. Grootaert, primary swamp forest, sweeping.

Distribution: Type locality: "Nigeria: Niger Prov., Mokwa". Afrotropical: Côte d'Ivoire, Democratic Republic of Congo* and Nigeria.

9. *Chaetogonopteron nectarophagum* (Curran, 1924) (Fig.6)

Material: 1♂, 1♀, D.R. Congo, Oriental Prov., Bomane village area at: 01°16.283'N, 23°43.994'E, 20–24.v.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs; 13♂♀, 30038, D.R. Congo, Kona, 13.v.2010, P. Grootaert, primary swamp forest, sweeping; 5♂, 30021, D.R. Congo, Yaekela, 07.v.2010, P. Grootaert, secondary forest, sweeping; 3♂, 1♀, 30004, D.R. Congo, Yaekela, 02.v.2010, P. Grootaert, marshland, sweeping; 1♂, 30015, D.R. Congo, Yaekela, 05.v.2010, P. Grootaert, swamp forest, sweeping; 1♂, 4♀, 30010, D.R. Congo, Yaekela, 04.v.2010, P. Grootaert, herbier, sweeping; 1♂, 1♀, 30003, D.R. Congo, Yaekela, 02.v.2010, P. Grootaert, road side, sweeping; 4♀, 30005, D.R. Congo, Yaekela, 02.v.2010, P. Grootaert, marshland, sweeping; 1♂, 2♀, 30032, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping; 18♂♀, 30033, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping; 45♂♀, 30017, D.R. Congo, Yaekela, 05.v.2010, P. Grootaert, pools, sweeping; 48♂♀, 30007, D.R. Congo, Yaekela, 02.v.2010, P. Grootaert, marshland, sweeping, is idem als 002 maar om 13.00; 18♂♀, 30038, D.R. Congo, Kona, 13.v.2010, P. Grootaert, primary swamp forest, sweeping.

Distribution: Type locality: "South Africa: Eastern Cape, East London". Afrotropical: Cameroon, Cape Verde Is., Côte d'Ivoire, Democratic Republic of Congo, Ethiopia, Gabon, Ghana, Malawi, Mauritius Is., Nigeria, Príncipe Is., Réunion Is., Rodriguez Is., Sao Tomé Is., Seychelles Is., Sierra Leone, South Africa, Tanzania, Uganda and Yemen (Sokotra Is.). Oriental: India, Nepal and Sri Lanka. Palearctic: Algeria.



Fig. 5. *Apelastoneurus gabonensis* (Grichanov, 2004)



Fig. 6. *Chaetogonopteron nectarophagum* (Curran, 1924)

10. *Chrysosoma mesotrichum* (Bezzi, 1908) (Fig.7)

Material: 1♂, 6♀, D.R. Congo, Oriental Prov., Likombo forest, 2 km SW Bomane, 1.28349, 23.72358, 20–22.v.2010, A.H. Kirk-Spriggs, Malaise traps, lowland evergreen primary forest (disturbed); D.R. Congo, Oriental Prov., Lieki village area at: 00°41.117'N, 24°14.362'E, 25.v–4.vi.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs.

Distribution: Type locality: “Congo”. Afrotropical: Cameroon, Republic of Congo (Brazzaville)?, Democratic Republic of Congo, Kenya, Rwanda, Sierra Leone and Uganda.

11. *Chrysosoma villiersi* (Vanschuytbroeck, 1970) (Fig.8)

Material: 2♀, D.R. Congo, Oriental Prov., Likombo forest, 2 km SW Bomane, 1.28349, 23.72358, 20–22.v.2010, A.H. Kirk-Spriggs, Malaise traps, lowland evergreen primary forest (disturbed).

Distribution: Type locality: “République du Congo [Brazzaville], Odzala”. Afrotropical: Republic of Congo (Brazzaville), Democratic Republic of Congo, Kenya, Tanzania and Uganda.

12. *Chrysotus arduus* Parent, 1934

Material: 1♂, 4♀, 30032, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping.

Distribution: Type locality: “E Nigeria: Forcados”. Afrotropical: Democratic Republic of Congo* and Nigeria.



Fig. 7. *Chrysosoma mesotrichum* (Bezzi, 1908)



Fig. 8. *Chrysosoma villiersi* (Vanschuytbroeck, 1970)

13. *Condylostylus congensis* Curran, 1927 (Fig.9)

Material: 1♂, 8♀, D.R. Congo, Oriental Prov., Bomane village area at: 01°16.283'N, 23°43.994'E, 20–24.v.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs; D.R. Congo, Oriental Prov., Lieki village area at: 00°41.117'N, 24°14.362'E, 25.v–4.vi.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs;

Distribution: Type locality: “Congo [Brazzaville]: Mayumbe, Lemba”. Afrotropical: Burundi, Cameroon, Republic of Congo (Brazzaville), Democratic Republic of Congo, Ethiopia, Kenya, Rwanda, South Africa, Tanzania and Uganda.

14. *Diaphorus insufficiens* Curran, 1925 (Fig.10)

Material: 1♂, D.R. Congo, Oriental Prov., Bomane village area at: 01°16.283'N, 23°43.994'E, 20–24.v.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs.

Distribution: Type locality: “Belgian Congo: Nyangwe”. Afrotropical: Democratic Republic of Congo, Mozambique and South Africa.

15. *Diaphorus lawrencei* Curran, 1926 (Fig.11)

Material: 1♂, 1♀, D.R. Congo, Oriental Prov., Bomane village area at: 01°16.283'N, 23°43.994'E, 20–24.v.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs.

Distribution: Type locality: “Port. E. Africa: Nyaka”. Afrotropical: Botswana, Chad, Democratic Republic of Congo, Ghana, Kenya, Malawi, Mali, Mozambique, Namibia and South Africa.

16. *Dolichophorus luteoscutatus* (Parent, 1936)

Material: 1♂, 1♀, D.R. Congo, Oriental Prov., Eyolo forest, ca. 2 km E Lieki, 0.69642, 24.24186, 25–29.v.2010, A.H. Kirk-Spriggs, Malaise traps, lowland evergreen swamp forest; D.R. Congo, Oriental Prov., Likombo forest, 2 km SW Bomane, 1.28349, 23.72358, 20–22.v.2010, A.H. Kirk-Spriggs, Malaise traps, lowland evergreen primary forest (disturbed).

Distribution: Type locality: “Congo Belge: Eala”. Afrotropical: Côte d'Ivoire, Democratic Republic of Congo, Sierra Leone and Tanzania.

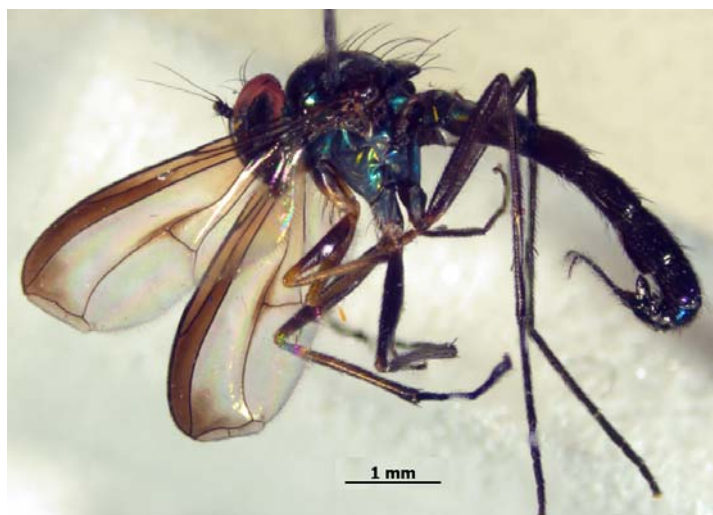


Fig. 9. *Condylostylus congensis* Curran, 1927



Fig. 10. *Diaphorus insufficiens* Curran, 1925

17. *Ethiosciapus bicalcaratus* (Parent, 1933) (Fig.12)

Material: 1♂, D.R. Congo, Oriental Prov., Lieki village area at: 00°41.117'N, 24°14.362'E, 25.v-4.vi.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs.

Distribution: Type locality: "Congo Belge: Ituri, Mont Wago". Afrotropical: Burundi, Comores Is., Democratic Republic of Congo, Kenya, Madagascar, St. Helena Is. and Uganda.

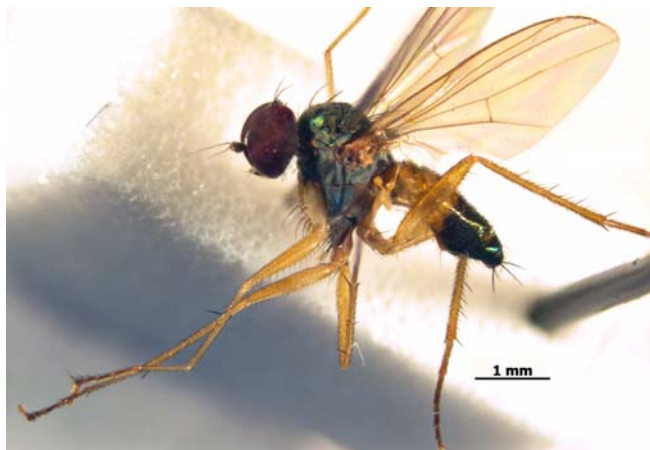


Fig. 11. *Diaphorus lawrencei* Curran, 1926



Fig. 12. *Ethiosciapus bicalcaratus* (Parent, 1933)

18. *Gigantosciapus africanus* (Parent, 1933) (Fig.13)

Material: 1♂, D.R. Congo, Oriental Prov., Lieki village area at: 00°41.117'N, 24°14.362'E, 25.v-4.vi.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs.

Distribution: Type locality: "Congo Belge: Munjungani (Likimi)". Afrotropical: Cameroon and Democratic Republic of Congo.

19. *Hercostomus pseudolictor* Grichanov, 2004

Material: 1♂, 30038, D.R. Congo, Kona, 13.v.2010, P. Grootaert, primary swamp forest, sweeping; 2♂♀, 30006, D.R. Congo, Yaekela, 02.v.2010, P. Grootaert, marshland, sweeping.

Distribution: Type locality: "Guinea: Thuo". Afrotropical: Côte d'Ivoire, Democratic Republic of Congo* and Guinea.

20. *Lichtwardtia fractinervis* (Parent, 1929) (Fig.14)

Material: 1♂, 1♀, D.R. Congo, Oriental Prov., Lieki village area at: 00°41.117'N, 24°14.362'E, 25.v-4.vi.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs; D.R. Congo, Oriental Prov., Bosega, nr. Djabir village, 00.51814°, 24.16574°, 3.vi.2010, A.H. Kirk-Spriggs, sweeping leaves primary lowland evergreen forest; 1♀, 30021, D.R. Congo, Yaekela, 07.v.2010, P. Grootaert, secondary forest, sweeping; 4♂, 1♀, 30004, D.R. Congo, Yaekela, 02.v.2010, P. Grootaert, marshland, sweeping; 1♀, 30015, D.R. Congo, Yaekela, 05.v.2010, P. Grootaert, swamp forest, sweeping; 1♂, 2♀, 30032, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping; 1♂, 4♀, 30033, D.R. Congo, Kona, 11.v.2010, P. Grootaert, primary swamp forest, sweeping; 1♀, 30017, D.R. Congo, Yaekela, 05.v.2010, P.

Grootaert, pools, sweeping; 8♂♀, 30038, D.R. Congo, Kona, 13.v.2010, P. Grootaert, primary swamp forest, sweeping.

Distribution: Type locality: [Benin:] “Dahomey”. Afrotropical: Angola, Benin, Democratic Republic of Congo, Ghana, Côte d’Ivoire, Malawi, Namibia, Nigeria, South Africa and Uganda.



Fig. 13. *Gigantosciapus africanus* (Parent, 1933)



Fig. 14. *Lichtwardtia fractinervis* (Parent, 1929)

21. *Medetera hamata* Parent, 1936

Material: 1♀, D.R. Congo, Oriental Prov., Yafira forest transect, 00.69594, 24.20107, 29–31.v.2010, A.H. Kirk-Spriggs, Malaise traps, primary lowland evergreen forest.

Distribution: Type locality: “Congo Belge: Eala”. Afrotropical: Democratic Republic of Congo.

Remark: The species is remarkable in having strong apical spine on fore coxa in both sexes (Parent, 1936), the diagnostic character of the genus *Dolichophorus* Lichtwardt, 1902 (Grichanov, 2009).

22. *Medetera maynei* Curran, 1925 (Fig.15)

Material: 12♂, 13♀, D.R. Congo, Oriental Prov., Lieki village area at: 00°41.117'N, 24°14.362'E, 25.v–4.vi.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs; D.R. Congo, Oriental Prov., Bomane village area at: 01°16.283'N, 23°43.994'E, 20–24.v.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs.

Distribution: Type locality: “Belgian Congo: Benza Mazola”. Afrotropical: Angola, Burundi, Cameroon, Republic of Congo (Brazzaville)?, Democratic Republic of Congo, Gabon, Gambia, Ghana, Kenya, Nigeria, Tanzania, Togo and Zambia.

23. *Pseudopelastoneurus diversifemur* (Parent, 1935) (Fig.16)

Material: 2♂, 5♀, D.R. Congo, Oriental Prov., Eyolo forest, ca. 2 km E Lieki, 0.69642, 24.24186, 02.vi.2010, A.H. Kirk-Spriggs, sweeping, lowland evergreen swamp forest; D.R. Congo, Oriental Prov., Bosega, nr. Djibir village, 00.51814°, 24.16574°, 03.vi.2010, A.H. Kirk-Spriggs, sweeping leaves, primary lowland evergreen forest; D.R. Congo, Oriental Prov., Bomane village area at: 01°16.283'N, 23°43.994'E, 20–24.v.2010, A.H. Kirk-Spriggs, sweeping, bush paths & village environs; D.R. Congo, Oriental Prov., Likombo forest, 2 km

SW Bomane, 1.28349, 23.72358, 20–22.v.2010, A.H. Kirk-Spriggs, Malaise traps, lowland evergreen primary forest (disturbed).

Distribution: Type locality: “Congo Belge: Rutshuru”. Afrotropical: Angola, Cameroon, Central African Republic, Côte d’Ivoire, Democratic Republic of Congo, Equatorial Guinea (Fernando Poo Is.), Gabon, Ghana; Kenya, Sierra Leone and Uganda.



Fig. 15. *Medetera maynei* Curran, 1925



Fig. 16. *Pseudopelastoneurus diversifemur* (Parent, 1935)

24. *Saccopheronta quinta* Parent, 1936

Material: 1♂, 30038, D.R. Congo, Kona, 13.v.2010, P. Grootaert, primary swamp forest, sweeping.

Distribution: Type locality: “Congo Belge: Eala”. Afrotropical: Democratic Republic of Congo, Gabon and Uganda.

Discussion

In a review of the *Diptera* of the Afrotropical Region, Kirk-Spriggs & Stuckenberg (2009), noted that much of the vast Congo Basin forest is rooted in sand that was a dune desert in the Miocene (*e.g.*, Senut *et al.* 2009), and that it has been hypothesized that the present range of this forest is, therefore, relatively recent, as compared to the immense age of equatorial forests elsewhere in the world. They note that this instability is reflected in the equatorial rainforest fauna, which is remarkably low in diversity, and there is no evidence of a highly adapted canopy fauna (Meadows 1996). Consequently, there are few lowland rainforest endemics of systematic significance among the *Diptera*.

Although *Diptera* sampling undertaken during the Boyekoli Ebale Congo Expedition 2010 was intensive (*e.g.*, Kirk-Spriggs 2011), deploying Malaise traps and other passive techniques, *Diptera* diversity in general was low and the abundance of some families, normally abundant in

tropical forests elsewhere in the world (e.g., *Mycetophilidae* and *Phoridae*), was significantly lower.

Despite this, numerous new taxa in various *Diptera* families have resulted, as evidenced by this and other studies in preparation and 6 new species of *Dolichopodidae* await formal description.

Acknowledgments

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